

## ABSTRACT

The present invention offers a method of introducing an impurity and an apparatus for introducing the impurity, with which an impurity layer can be formed easily in a shallower profile. Component devices manufactured taking advantage of these method or apparatus are also disclosed.

- 5 When introducing a material to a solid substance which has an oxidized film or other film sticking at the surface, the present method and apparatus first removes the oxidized film and other film using at least one means selected from among the group consisting of a means for irradiating the surface of solid substance with plasma, a means for irradiating the surface of solid substance with gas and a means for dipping the surface of solid substance in a reductive liquid; and then, attaches or introduces a certain
- 10 desired particle. The way of attaching, or introducing, a particle is bringing a particle-containing gas to make contact to the surface, which surface has been made to be free of the oxidized film and other film. Thus, the particle is attached or introduced to the surface, or the vicinity, of solid substance. The component devices are those manufactured taking advantage of the above method or apparatus.

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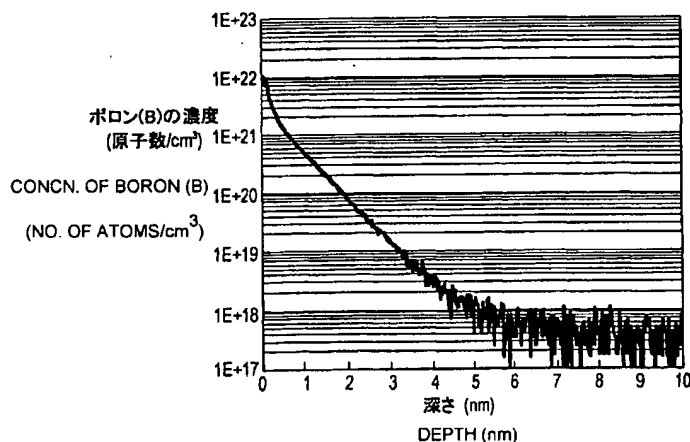
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(54) Title: METHOD OF INTRODUCING IMPURITY, DEVICE AND ELEMENT

(54) 発明の名称: 不純物導入方法、装置および素子



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(57) Abstract: A method of introducing an impurity wherein a shallow impurity layer can be formed easily; an impurity introduction device; and an element produced thereby. In these impurity introducing method and impurity introduction device, when it is intended to introduce a substance in a solid base having a film of, for example, an oxide attached to a surface thereof, the film of, for example, an oxide is removed by at least one means selected from the group consisting of means for irradiating the solid base surface with plasma, means for exposing the solid base surface to a gas and means for immersing the solid base surface in a reducing liquid before effecting attachment or introduction of desired particles. The method of attaching or introducing desired particles comprises bringing the solid base surface having the film of, for example, an oxide detached therefrom into contact with a gas containing desired particles so as to effect attachment to or introduction in the solid base surface or vicinity thereof. Elements are produced by the above impurity introducing method or impurity introduction device.

(57) 要約: 浅い不純物層をより簡単に形成できる不純物導入方法、不純物導入装置およびそれによって製造される素子が提供される。この不純物導入方法および不純物導入装置は、表面に酸化物などの膜が付着している固体基体に物質を導入する際に、プラズマを固体基体表面に照射する手

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